國立中央大學

統計研究所

學術演講

主 講 人:彭健育 教授(中央研究院 統計科學研究所)

講 題: Student-t Processes for Degradation Analysis

時 間:108年12月10日(星期二) 上午11:00 ~ 12:00

地 點:中央大學鴻經館M429室

茶 會: <u>上午 10:30 ~ 11:00</u> 地 點: 鴻經館 510 室

ABSTRACT

Stochastic processes are widely used to analyze degradation data, and the Gaussian process is a particularly common one. In this talk, we propose a robust statistical model using a robust process to assess the lifetime information of highly reliable products. This model is statistically plausible and demonstrates a substantially improved fit when applied to real data. A computationally accurate approach is proposed to calculate the first-passage-time density function of the robust degradation-based process; related properties are investigated as well. Several case studies are performed to demonstrate the flexibility and applicability of the proposed model with random effects and explanatory variables. This talk is based on the joint work with Ms. Ya-Shan Cheng.

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